

## **Summary of Off-Road Implementation Advisory Group (ORIAG) Meeting That Was Held on 3/29/10**

The meeting agenda is included at the end of this document. ARB staff gave a presentation summarizing the status of implementation of the off-road regulation. The slides from staff's presentation are available at <http://www.arb.ca.gov/msprog/ordiesel/oriag/meetings/032910/handouts032910.pdf>. A video recording of the meeting is available at <http://www.cal-span.org/cgi-bin/media.pl?folder=CARB>.

A hearing for the U.S. EPA to approve the ARB's off-road regulation is set for Washington DC for April 14, 2010. A request has been made (not by ARB) to hold the hearing in California.

### **Load factors**

ARB staff explained that we are working to refine our estimates of emissions from off-road diesel vehicles. Staff explained that one input to the emissions inventory that may need to be updated is load factor. Staff requested data on load factor from fleets and equipment dealers.

Rod Michaelson is willing to share load factor data.

ORIAG members had many questions re: exactly what load factor data ARB staff needs. Nicole Dolney from ARB's Planning and Technical Support Division spoke at the meeting about the off-road inventory, and provided further information on the data that fleets could provide, such as ECM data (such as idle time, and surrogates for load factor). ARB staff is still investigating whether temperature (such as captured during data logging for DPF assessment) may correspond to fuel use and load

### **Enforcement**

Eric Brown from ARB's Enforcement Division spoke on off-road regulation enforcement that has occurred.

ORIAG members would like more information regarding the off-road regulation enforcement is occurring. They also suggested it would be useful to more broadly publicize that we are enforcing (press release, etc.). People would take it more seriously if they knew the magnitude of fines being enforced.

Other ORIAG member comments regarding enforcement were as follows: Enforcement violations can be important communication tool. It would be useful if fleets knew that their competitors can rat them out.

ARB should post total amount of fines pending.

People deserve to be enforced against if they have not registered.

Caltrans bid specs says fleets must comply with regulation.

One advantage of reporting is that it can assist law enforcement agencies in recovering stolen machines. ARB should publicize if stolen equipment is found.

### **Retrofit visibility**

ARB staff's presentation included a summary of the retrofit visibility issue and exemption process. As part of the ARB presentation, it was pointed out that the exemption request process was simplified. The ARB has received 5 retrofit exemption requests.

ORIAG members made the following comments and questions regarding retrofit visibility safety:

- How does one take into account non-level surfaces (when a machine is working on a slope) when measuring visibility impacts?
- Want some consensus on a practical and repeatable testing method.
- Recommend reaching out to the Federal Mining Safety and Health Administration and get them to the table.
- Visibility impact of accessories - how is that handled, does California Division of Occupational Safety and Health (Cal-OSHA) regulate that? ARB staff responded that the visibility process being developed is limited to Verified Diesel Emission Control Strategy (VDECS) (is not for accessories).
- Requested an update on Showcase (ARB retrofit demonstration project) would be helpful. Possibly have John Karim (who is managing the Showcase demonstration project) speak at next ORIAG meeting.
- Is visibility impact of retrofits measured against factory new or against machine with attachments?
- What might be the cost of test for visibility exemption? (As was mentioned by ARB later in the meeting, the exemption request process was simplified from the original proposal and can be done inexpensively).
- Make, model, serial number – what level of vehicle detail is needed? Does exemption apply across these? ARB staff responded we will have to look at this on a case by case basis. Sometimes the muffler situated differently.

- If a fleet intended to install an exhaust retrofit for double credit and they experience a delay due to visibility issues, can they still get double credit?
- Since there is no regulation enforcement now, is it acceptable to remove filters? ARB staff confirmed this is correct.
- If ARB receives reports of problems with a VDECS, do they publicize these? ARB staff responded that such reports have not generally been publicized but have been used to update verifications when appropriate.

### **Other Retrofit Installation Issues**

Several comments and suggestions were given about the quality of retrofit installations. It was suggested that a few hours or a meeting be devoted to this subject, regarding the following issues/ideas:

- Currently, for under hood installs (and installations in general) - If a fleet requests an exemption and someone says they can do it, how will we be sure that's really true and it isn't a fly by night operation? (Dealerships/repair shops often have long relationships with fleets.)
- What if a vehicle really should not be retrofit under hood (due to heat issues – engine warranty issue, or engine access)? Could there be some certification of installers to ensure quality installations are done? Maybe have a panel judge this.
- Installers could be required to be bonded. Could retrofit manufacturers require bonding for installers? Might this be too onerous for retrofit manufacturers? For ARB to require retrofit installers to be bonded, new state statutory authority may be required.
- How should a threshold be set for what installation companies can reply (as part of the ARB exemption process)? Maybe only let certain companies reply (those that have done a certain number of retrofits).
- Typically retrofits are sold “installed”; selling across the counter is not as frequent and is frowned upon but does occur. One retrofit manufacturing company tried to prevent 3<sup>rd</sup> parties from purchasing and installing the product but has to allow those sales based on restraint of trade law.
- One retrofit manufacturer stated they require installers they work with to take a four day training course.
- How do you ensure that retrofits will not cause engine damage?

- What is “reasonable” for retrofit installations? For example, more retrofits can be installed under hood if extensive modifications are done to original vehicle configuration (move radiator, oil coolers etc). Would such vehicle modifications void the vehicle/engine warranty?
- It was suggested that, for installation examples, photos of pre- and post-install be given.
- The whole installation process needs more policing.
- Ensure that airport ground support equipment retrofits do not endanger aircraft.
- Require installers to be bonded – to guarantee installation.
- There are approximately 1,100 retrofits reported for vehicles in DOORS. (Post-meeting update: this includes installed retrofits, and those on order.)

### **Reporting (DOORS) Data**

The ARB presentation included two graphs for the number of fleets and vehicles that have been reported. For future meetings, the members are interested in more reporting details, such as:

- Numbers by large/medium/small fleet size.
- Current vs. projected counts.
- How many retrofit.
- Numbers of public and private fleets (vehicles, and retrofits).
- What has been successfully retrofit.
- Hp, equipment type – would be useful for retrofit manufacturers.
- How many vehicles have left (credits claimed).
- Tier distribution.

It was suggested that scheduled updates be supplied to the members, such as once a quarter.

Members may send Kim Heroy-Rogalski an email to request available reporting data.

It was noted that for the State Implementation Plan (SIP), fleet compliance was assumed to be 100%.

### **PM Risk Methodology Being Updated**

What are the results from the scientific review panel (symposium) of PM risk that was held on February, 26, 2010? (Post meeting update: The ARB is reassessing the methodology developed to quantify the association between PM2.5 exposure and premature death. The symposium held on February 26 was part of this effort. The draft

report will be out in April or May, and comments will be accepted, and the final report should be released in July 2010, see <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm>.

### **ORIAG member discussion – Ideas for Regulation Changes**

ORIAG members made the following suggestions for possible off-road regulation changes:

- Designating low-use is very difficult because it is hard to know what will be used, and what will not be used. Fleet owners do not know what jobs will be in future, and therefore what machines will be required. The suggestion was made to instead allow low-use be limited across the fleet (by fleet horsepower (hp)), instead of choosing specific machines. Designate a set of equipment for max hp-hours (hp-hrs)(ex. for a 1,000 hp fleet, a fleet owner agrees not to use in total more than 100,000 hp-hrs).
- Raise low-use threshold from 100 to 250 or 300 hours per year (hrs/yr).
- Set fleet average in terms of age rather than emission factor. Count retrofit as equivalent age (i.e. emission levels with retrofit equivalent to an engine model year). ARB staff responded that it is important to have the regulation be fair both to fleets that start out very old (dirty) and those that start new (clean).
- Link regulation to unemployment rate – can scale back if unemployment rate gets too high.
- The current regulation is impossible – it will bankrupt everybody.
- Give tax credits to companies to build Tier 4is.
- PM fleet average – give credit for repowers and turnover, not just retrofits
- The first several years of compliance are the hardest.
- Do need some kind of safety mechanism to older fleets (some sort of BACT option). Many fleets are predominantly T0 – some 80-90% T0. Likes safety valve of BACT option. Concurrence that a BACT option is needed.
- People like simplicity of fleet age. It would make it more understandable what a fleet needs to do. However, fleet age would not take into account when various tiers take effect (tiers are in steps, age is a sloped straight line).
- Don't want to scrap whole regulation and start over.
- Move targets around and BACT targets around based on economy and inventory.

- Take more time to revisit the regulation changes. Do not want to rush things.
- Idea of emissions bubble was proposed (combining off-road, on-road, and portable, etc.). The companies may be subject to 7 or more CARB rules. It would be easier if they could keep the same records for everything. Maybe for fleets that fall under 2 or more or 3 or more regulations, the option to quantify company emissions and comply in that manner.
- Everything is about survival right now (bad economy). Fleets are not buying machines/equipment now because of the economy.
- Yard trucks – putting gasoline engines in yard trucks. More information is needed as to regulation requirements and benefits.
- What about fleets that have already taken actions to lower their emissions? What if they paid out of pocket versus with incentive funds? ARB should give some credit for what people have done.
- Extend life of credits if we delay reg (maybe extend life of reduced activity credit).
- Is there some way to demonstrate special buying for regulation (when people bought even though business was bad)
- Maybe offer something very simple as a 3<sup>rd</sup> path (ban certain tier on certain date).
- Give some option that does not require retrofitting – maybe higher turnover.
- 2014 PM targets are very difficult to meet without retrofitting. Retrofitting is not appropriate for rental. Look at rental association written comments that have been submitted pertaining to this.
- ARB should extend target dates and compliance dates, rather than keeping fleet average in place and extending BACT only. Shift the whole regulation back several years; not compress it so fleets have to do as much but in a shorter time period.
- AB8 2X results in compression of requirements. It allows fleets only to delay going out of business. Maybe do some sort of sliding scale fixes that have built into them impact of economy (where reg requirements adjust automatically based on economy).
- Give PM BACT credit for repowers (PM credit for repowers and turnover). If rule is delayed further, extend the double credit deadline.
- Consider targeted sales tax exemptions.

- Remove inflation factor for hours in fleet average (1.18). This discouraged people from using hours in fleet average, which would be especially beneficial to older fleets.
- Maybe charge some sort of fine to fleets with older equipment – moving funds to newer technology (trade for rebate).
- There are many types of credit. Give some sort of inflation of credit for actions taken before original compliance dates – March 1, 2010.
- Rental – rental association members are not complaining about unfairness for those that took initial actions. Members like averaging. They don't like retrofitting. The AB8 2X credits do not help them much because they naturally turn over their equipment really fast anyway. Take into account the rental business model.
- Fixes to the regulation should be longer term – so the regulation is not revised again in 2 years. Fleets cannot plan around that short of time frame! Have an out, some off-ramp during bad economic times.
- Larger construction companies look 7-8 years ahead. Granite Construction does capital forecast 5 years out. Changes to regulation throw things out of whack. It is very difficult to forecast with a terrible economy, large unknowns.
- It is tough to predict fleet averages if fleet is on cusp of barrier between fleet sizes.
- The ability to project future company/fleet requirements is very difficult.
- Many companies do not buy the latest technology – bugs/issues take 2 to 4 years to be worked out. Reliability is key.
- There are concerns about shortages of Tier 3 and 4 engines.
- It was requested that at the special August Board meeting, speakers be given more than 3 minutes each.
- Time exposure to PM - could look at to compare health benefits, to show we can change regulation without impacting PM health benefits.
- No one can retrofit 20% per year.
- The credit provisions are confusing.
- Fleets may be pushed to retrofit something that they would like to get rid of in a few years. That is divergent from good business practices.
- For reduced activity – is there a formal submit button in DOORS? ARB staff replied “No”.

- Compliance certification - may need some sort of enforcement advisory on this.  
Some official policy call.

## **DOORS**

ARB staff presented a summary of recent improvements to the DOORS reporting system.

Bill Davis responded that their consultants will provide ARB some feedback.

**The meeting agenda is on the next page**





## **Agenda for a meeting of the Off-Road Implementation Advisory Group (ORIAG)**

Monday, March 29, 2010  
9:30 a.m. – 3:00 p.m.

California Environmental Protection Agency  
1001 I Street, Training Room 1  
Sacramento, California 95814

Email for submitting comments during Public Comment Period: [mbaker@arb.ca.gov](mailto:mbaker@arb.ca.gov)

To access the webcast, please go to: <http://www.calepa.ca.gov/broadcast/?BDO=1>

If you experience any difficulties with the webcast, please contact the helpdesk at:  
(916) 445-8812 or [helpdesk@arb.ca.gov](mailto:helpdesk@arb.ca.gov)

9:30 – 11:00 ARB Staff Presentation re: Status of Regulation (Enforcement Delay, DECS Visibility Update, Update Re: Fleet Reporting, Status of Regulation changes from January and July 2009 Board Hearings, Recap of March 11 EO hearing and plan for proposed changes to off-road regulation)

11:00 – 12:00 ORIAG member suggestions for regulation changes

12:00 – 12:45 Lunch

12:45 – 1:30 Continue discussion on ORIAG member suggestions for regulation changes

1:30 – 2:00 (or as early as 12:45) DOORS Updates

2:00 – 2:30 Public Comment Period (this time may move up to as early as 1:15, depending on previous items)

2:30 – 2:45 (or as early as 1:45) Wrap Up and adjourn